



PATENT
ATTORNEY'S DOCKET NO.: NRG-115

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: Graziano Vignali et al.
Serial No.: 10/584,257
Filed: June 23, 2006
For: PROCESS FOR COLOURING CERAMIC
MATERIALS
Examiner: Russell J. Kimmerle III
Art Unit: 1791
Confirm. No.: 1481

Mail Stop: PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 C.F.R. § 1.132

Sir:

I, Graziano Vignali, do hereby declare and say that:

1. I have been an employee of Metco SRL since 1994. I currently hold the position of Chief Executive Officer and Chairman, and through my position have specific personal knowledge of all of the company's licensed inventions including all aspects of the invention described and claimed in U.S. Patent Application Serial No. 10/584,257 ("the '257 application), of which I am the named inventor.

2. Although I am the CEO of Metco, I remain involved in the company's R&D activities as the company's senior scientist. My primary areas of focus are organic synthesis and applications. Many R&D projects at Metco have resulted in several patent applications and several patents of which I am a named inventor. A

list of the patent applications and patents is attached as Exhibit 1.

3. Prior to my involvement with METCO, from 1982 to 1994, I managed the R&D Unit for CIBA that researched new stabilizing agents based on sterically hindered amines and new active principles. Part of my responsibilities was to supervise several projects to investigate the interaction between the new stabilizing agents and available pesticides. These efforts resulted in a number of patent applications and patents listed in attached Exhibit 2.

4. From 1979 to 1982, I managed a Pilot Plant for CIBA. I was in charge of developing new manufacturing processes for a polyolefin stabilizer based on sterically hindered amines and their intermediates.

5. From 1973 to 1979, I was employed by CHIMOSA/CIBA as a junior scientist in the R&D Chemistry Laboratory.

6. I have a high school degree in Chemistry.

7. I have studied the rejections set forth in the office action mailed September 15, 2008 as well as the cited reference U.S. Patent No. 6,228,160 to Hanich et al. (hereinafter referred to as "Hanich"). Based on my evaluation, I assert the following.

8. Hanich discloses a process to produce a stain that fires to a red-brown color [2:65]. The stains are produced by uniformly distributing a coloring component, i.e., Fe_2O_3 and/or one or more other iron compounds [2:66], in a pulverulent matrix based on an oxide-like and /or silicate-like material [3:11-15]. The pulverulent matrix is amorphous and is preferably amorphous silica [4:50-61].

9. The stains according to Hanich thus comprise a Fe source and amorphous silica. As for other conventional ceramic pigments, the coloring of the ceramic composition is obtained by mixing the stain with the ceramic composition

[6:20-21]. One of the disclosed illustrative examples involves 4 weight % of stain mixed with 96 weight % of ceramic composition, which is subsequently homogenized [5:22-23]. The stain is uniformly dispersed into the ceramic composition.

10. Analysis of the colored portion of ceramic material, colored according to the teachings of Hanich, with a scanning electron microscope (SEM), under the conditions set forth in my patent application at 4:7-9, should show granules of colored stain uniformly distributed in the ceramic material wherein the stain granules are composed of silica with an iron compound residing in the silica pores. The iron-based coloring agent should be found solely in the stain granules and not throughout the surrounding ceramic matrix. The uncolored portions of the ceramic composition should exhibit a conventional ceramic composition.

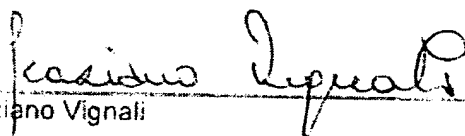
11. In contrast, my disclosed and claimed invention comprises the step of adding precipitated and/or silica gel to a conventional ceramic mix and *subsequently* treating the ceramic material thus obtained with a colorant solution comprising an organic or inorganic Fe(II) and/or Fe(III) compound [12:14-21]. Treatment of the ceramic material with the coloring solution is performed using conventional techniques that enable the total or partial covering of the ceramic surface with the coloring solution [13:15-20].

12. Analysis of the colored portion of a totally or partially decorated ceramic material prepared in accordance with the invention with SEM, again under the conditions set forth at 4:7-9, shows colored granules containing silica and an iron compound uniformly distributed into the ceramic composition. Unlike Hanich, the ceramic composition surrounding the colored granules also contains the iron compound as is colored by same. A photo of this is shown as Exhibit 3.

13. Comparison of the actual analysis of ceramic material prepared in accordance with my invention to a proposed analysis of ceramic material prepared in accordance with Hanich, results in a clear distinction in the resulting products. My invention results in a ceramic material with silica granules colored by the Fe-based coloring solution and uniformly dispersed throughout the ceramic material. The ceramic material surrounding the silica granules is also colored by the Fe-based coloring solution. In contradistinction, the ceramic material prepared according to Hanich results in the Fe-based colorant being concentrated solely in the silica component of the granules as opposed to also being freely and uniformly dispersed in the ceramic material. For these reasons, my claimed invention should be considered patentably distinct from the teachings of Hanich.

All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patents issuing thereon.

Signed:


Graziano Vignali

Date: March 13, 2009